THE HUNTERIAN ORATION FOR 1897.

CHRISTOPHER HEATH.

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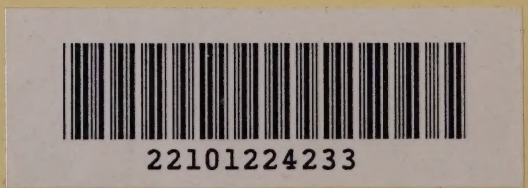
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HUNTERIAN ORATION.

From the Author.

THE

HUNTERIAN ORATION.

DELIVERED AT THE ROYAL COLLEGE OF SURGEONS,
FEBRUARY 15TH, 1897.

BY

CHRISTOPHER HEATH, F.R.C.S.,

PAST PRESIDENT OF THE COLLEGE;
HOLME PROFESSOR OF CLINICAL SURGERY IN UNIVERSITY COLLEGE, LONDON;
AND SENIOR SURGEON OF UNIVERSITY COLLEGE HOSPITAL.

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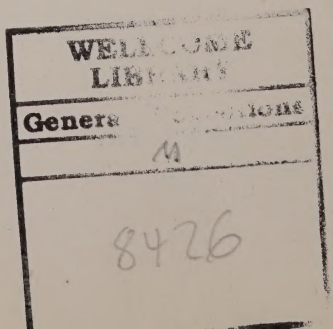

HUNTERIAN ORATION.

Mr. President and Gentlemen,—Before proceeding to deliver the fifty-eighth Hunterian Oration allow me to congratulate you, sir, on your restoration to health, and to express the gratification of myself and my colleagues at your being able to take the chair to-day. I have also to express my acknowledgments to my colleagues in the Council of this College, who have desired that I should undertake the duty of Orator on the present occasion; and next I have to thank you who have kindly attended here to-day to do honour to the memory of the immortal John Hunter. Allow me also to congratulate you on the fact that we meet in a rehabilitated theatre, which is, I hope, more comfortable to its occupants than the former one.

John Hunter was a great anatomist, a learned physiologist, and a profound pathologist, as his monumental museum and his numerous writings sufficiently show; but there has been among the Hunterian Orators of late years a tendency, I think, to ignore the fact that Hunter was also a great surgeon. It will be my effort to-day to magnify the claims of John Hunter to have been a great surgeon.

When seventeen years of age John Hunter stayed for a time with his brother-in-law Buchanan, and thus acquired manual dexterity in the carpenter's workshop, which is, after all, no bad preparation for the art of chirurgery. In his twentieth year John joined William Hunter, and soon showed his dexterity as a dissector, and became by rapid

strides a human anatomist. In the following summer he attended at Chelsea Hospital under Cheselden, the leading surgeon of the day, and only entered as a pupil at St. Bartholomew's, under Percival Pott, when Cheselden's health gave way. This was in 1751, and here Hunter must have seen a good deal of the best surgery of the day; but in 1754 we find him entering as a pupil at St. George's Hospital, where he two years later filled the responsible position of house-surgeon. In 1759 his hard work of various kinds had told upon Hunter's health, and he sought change of air by joining the army medical service, with which he served at the siege of Belleisle in 1761, and subsequently in Spain. Here he saw much surgery, and upon it he based his paper on gun-shot wounds, and showed how erroneous was the then received practice of invariably opening out bullet wounds. His paper on "Inflammation" also was to a great degree founded upon observations made at Belleisle, and in it he constantly refers to cases which came under his notice there.

Having thus added largely to his surgical experience, Hunter returned to London in 1763 at the conclusion of the war, and devoted himself to what little surgery came in his way, but worked hard at those researches in anatomy and physiology which have rendered his name immortal. In 1768 he was elected surgeon to St. George's Hospital, where he enjoyed for five-and-twenty years the opportunity of practising surgery before an admiring crowd of pupils, many of whom attained eminence in later life. Hunter was then in his fortieth year, which may be fairly considered a surgeon's prime; and it is not wonderful that he attracted as his pupils men like Jenner, Home, Carlisle, Abernethy, and Astley Cooper.

It is to be regretted that we have so little contemporary information respecting Hunter as a clinical teacher. That he did teach in the wards of St. George's there can be no doubt, for it is impossible to imagine Hunter failing to observe, to record, and to annotate verbally or in writing the cases which must necessarily have come before him in

that hospital. But the days of clinical clerks and surgical registrars were not yet come, and there is no official record of Hunter's work to be found at St. George's. How Hunter would have rejoiced in the complete system of recording not only cases, but post-mortem examinations and museum specimens, which now obtains in that institution, and in every other well-managed hospital, metropolitan or provincial! There were in those days no weekly and other medical journals teeming with records of clinical experience, nor were the then existing medical societies much affected by hospital surgeons. In 1783 the Society for the Improvement of Medical and Chirurgical Knowledge was founded by John Hunter and Dr. Fordyce, and to its 'Transactions' Hunter contributed papers on "Inflammation of the Internal Coats of Veins," read in 1784, and on "Introsusception" in 1789, but for the first twenty years of his hospital work the clinical record is wanting.

In 1774 Hunter began a course of systematic lectures on the Principles of Surgery, of which the library of this College possesses manuscript notes of various dates by different members of his class. The well-known edition by Palmer, published in 1833, was taken from the short-hand report by Mr. Nathaniel Rumsey of Chesham, of lectures delivered in 1786 and 1787, and no doubt fairly represents Hunter's teaching. It was these lectures which Astley Cooper and Abernethy attended, and which they and others found difficulty in following, mainly because of Hunter's defects as a lecturer,—for he was not an attractive lecturer, his manner was heavy and his language inelegant and even coarse. Still these lectures did more to lay the foundation of modern surgery then any other work of the last century, and proved Hunter to be not merely a philosopher, but as I shall hope to show, a sound practical surgeon. Thus in his sixteenth lecture he discusses in much detail the affections, common then as now, grouped together under the term hydrocele. He distinguishes between three species: "first, when it takes place in the tunica

vaginalis testis; secondly, when it occurs in the body of the testicle; thirdly, when in the spermatic cord;" and then proceeds to discuss the diagnosis and treatment of each variety. He lays down that a cure must be produced either by adhesion of the two surfaces of the tunica vaginalis (which he regards as rare) or by suppuration and granulation, and takes credit for having been the first to teach the latter. He discusses the treatment by incision and by caustic, and combats the notion that the entire tunica vaginalis can be made to slough out and come away by the opening made with the caustic. Lastly, he recommends the following method, which will not, I fear, commend itself to the antiseptic surgeon of to-day:— "Make an incision into the sac about three inches in length, and let the whole of the water escape; then fill it as full as possible with pretty stiff poultice, occasionally introducing your finger to direct the poultice into every corner of the bag; and lastly, put some lint into the wound to keep the poultice in. The poultice should be made of linseed meal, and pretty stiff; if it is made into little balls it will be still more convenient. The advantages that this method has over the others are, first, that it is simpler than exposing the whole; secondly, the parts are kept universally distended by an extraneous body, so that the inflammation becomes universal; thirdly, the poultice does not become entangled in the granulations as dry lint does; fourthly, as the parts granulate and contract, the poultice is gradually squeezed out, and only requires superficial dressing during the whole time."

In his lecture on "Injuries of the Head," Hunter shows himself to be far in advance of his contemporaries, with whom trephining the skull was a matter of routine. He says, "In cases of fissure of the skull only, it may admit of dispute whether we are always to trepan. If there is no symptom of an injured brain, certainly it will not be necessary. It may not be necessary even when attended with symptoms of an injured brain, for the injury may only be from the concussion, and we never

trepan for concussion." Again he lays great stress upon the danger of opening the dura mater because of the occurrence of *fungus cerebri*, which was almost constant before the introduction of antiseptic dressings, and even now is not entirely unknown. He says, "Whenever I have seen the dura mater opened the brain has worked through the opening, and the patients have died. This was the case with a Mr. Cooper, whose dura mater I opened with a crucial incision on account of the state of the parts beneath; he died, and I think it is probable I killed him by opening the dura mater." Mark the honesty of the man—"It is probable I killed him"! Is the surgeon of to-day always as truthful?

Fashion reigned in Hunter's time as at present. Thus under the head of simple fracture we find him saying, "The position for the patient to lie in was formerly on the back, but the side is now generally adopted. However, I think its whole advantage is that it has the appearance of novelty, and is not a real improvement; *but time will establish the truth.*" Again, in speaking of fractured patella he says, "Before the year 1750 it was the practice to endeavour to bring the broken ends of the bones as near together as possible, with little or no motion allowed; but after that a fashion arose (for we have fashions in surgery as in everything else, arising perhaps from a person happening to do well who had not been treated in the old way) of letting the parts separate, and of not forbidding motion so strictly: but now caprice has, I believe, had its day, and we are taught by reason and experience that the parts should be, when cured, as nearly as possible in their natural situation."

Here, thanks to Mr. D'Arcy Power, I am able to avail myself of a little bit of contemporary criticism in the form of an "Essay on the Fracture of the Patella or Knee-pan, by John Sheldon, F.R.S., Professor of Anatomy in the Royal Academy of Arts, London, 1789." Mr. Sheldon combats the view that extension of the leg relaxes the muscles attached to the patella, though, as he

says, "those anatomists whose opinions I am acquainted with, as the late Dr. Hunter, Mr. J. Hunter, the late and present Professor Monro, and every other teacher or writer I have seen or heard of, have entertained the same opinion, though the contrary is evidently the case." He proceeds to argue that the thigh must also be flexed upon the pelvis, a practice which has been generally adopted for many years, so as to relax the rectus; but he also recommends slight flexion of the knee, so as to relax the hamstrings—a useless and harmful proceeding.

In his lecture Hunter tells the story of a lady with an old fractured patella and great separation of the fragments, with consequent loss of power; and Sheldon speaks with approval of his plan of exercising the muscles of the thigh, by swinging the leg with weights attached to the foot. How both these surgeons would have appreciated my colleague Mr. Barker's simple plan of wiring the fragments together by the subcutaneous method! ('Brit. Med. Journ.,' April 18th, 1896).

John Hunter's name is so inseparably connected with the treatment of aneurism that it is almost unnecessary for me to maintain his claims to originality in his operation of applying a ligature at a distance from the sac, particularly after the exhaustive lectures on the subject of aneurism which were given in this theatre in 1871–3 by Mr. Holmes. The claim put forward by French surgeons, and particularly by Broca in his classical work on aneurisms, for Anel as the proposer of the Hunterian operation will not bear investigation; for it is clear that Anel really placed a ligature above the aneurism, and in close proximity to it, and only differed from his predecessors in not laying open the sac. It is well known that this method and its varieties proved so fatal from secondary hæmorrhage that Pott, the leading authority of the day, recommended amputation as the only safe proceeding; and on this Hunter remarks in his lectures, "When the disease is in an advanced stage I agree with Mr. Pott in thinking amputation necessary and preferable.

The earlier, therefore, the operation for the aneurism is performed the better, not waiting with the expectation that an increased size of the aneurism will produce an increased size of the collateral branches. If the artery, however, cannot be tied above the aneurism in the operation, where can it be tied if the limb be amputated? *Why not tie up higher in the sound parts where it is tied in amputation, and preserve the limb?*"

The first operation performed by Hunter for popliteal aneurism, by ligature of the femoral artery in Hunter's canal, was in December, 1785, the patient being a coachman aged forty-five. Sir Everard Home gives full details of the case in the 'London Medical Journal,' vol. vii, 1786, and vol. viii, 1787, and also in the first volume of the 'Transactions' of a Society for the Improvement of Medical and Chirurgical Knowledge, which was published in 1793, during Hunter's lifetime. It is quite clear that the vein was included in the ligatures, which were four in number, two being tied and two kept in reserve. The patient recovered. Home gives four other cases operated on by Hunter, one of which was fatal; and on the fourth case it is remarked that "in performing the operation the vein was not included in the ligature," implying that previously the vein had been so included.

In the museum of this College is preserved the preparation of this historical case (3258) (obtained by Hunter "with some trouble and considerable expense" on the patient's death, fifteen months after the operation), a drawing of which accompanies Home's second paper in the 'London Medical Journal,' 1787. "The femoral artery was impervious from its giving off the arteria profunda as low as the part included in the ligature. Below this part the femoral artery was pervious down to the aneurismal sac, and contained blood, but did not communicate with the sac itself, having become impervious just at the entrance. What remained of the aneurismal sac was somewhat larger than a hen's egg, but more oblong, and a little flattened. It contained a solid

coagulum of blood, which adhered to its internal surface. A section made of this coagulum appeared to be composed of concentric laminæ, uniform in colour and consistence. The trunk of the femoral vein where it passed along the side of the tumour must have been obliterated."

Appended to the account of the dissection is the following remark :—" The conclusion to be drawn from the above account appears a very important one, viz. that simply taking off the force of the circulation from the aneurismal artery is sufficient to effect a cure of the disease, or at least to put a stop to its progress, and leave the parts in a situation from which the actions of the animal economy are capable of restoring them to a natural state." We are not informed whether this statement of Home's had the support of Hunter or not, but it is a little remarkable that no reference should have been made to the collateral circulation, which has such an important bearing upon the formation of laminated clot within an aneurism.

Our museum contains also, thanks to the late Mr. Thomas Wormald, the specimen from Hunter's fourth case, in which the vein was not included in the ligature. The patient was thirty-six years old, and survived the operation fifty years. " The portion of artery obliterated by the ligature extends from the origin of the profunda downwards to the division of the popliteal. A small oblong mass of earthy matter occupies the situation of the aneurism."

Of course Hunter's new operation had a certain amount of opposition, notably from his colleague Bromfield and from Percival Pott; but we find in Home's paper that Mr. Lynn, of the Westminster Hospital, had a successful case, the date of which is not given. Hunter was cursed with a candid friend, one Jesse Foot, surgeon, who published the year after his death 'The Life of John Hunter,' in which he criticised severely the whole of Hunter's professional career; but it is remarkable that he makes no allusion to the operation for aneurism.

Of the separate volumes which Hunter published, the first was that on 'The Natural History of the Human Teeth,' and a 'Practical Treatise on the Diseases of the Teeth,' price £1 1*s*. 1778.

The late Mr. Thomas Bell, F.R.S., himself a distinguished dental practitioner, as well as for many years Lecturer on Comparative Anatomy at Guy's Hospital, in the preface to Hunter's essay in Palmer's edition, speaks of the work thus :

"If it may be stated that the work in question is perhaps the least felicitous effort of this extraordinary genius, and that of which the errors are the most obvious and striking, some apology may be found even for these in the confined nature of the subject, and especially in the obscure and anomalous structure of the organs of which it treats ; whilst the basis which his experiments and observations have laid for subsequent improvements in our knowledge, both of the physiology and pathology of the teeth, as well as in the treatment of their diseases, constitutes a never-ceasing claim to the gratitude and admiration of every scientific practitioner of dental surgery."

Mr. Jesse Foot, surgeon, in the 'Life of Hunter,' already mentioned, does not spare the author, but devotes no fewer than thirty pages to a detailed criticism of this work on the teeth, interspersed with remarks of a more or less scurrilous nature. Foot says, no doubt with truth, "John Hunter, at the time he published this book, had but very little practice, the whole circle being then filled up by names to which I have before alluded ; and Hawkins, Bromfield, Sharpe, and Pott were proud and unaccommodating professional men. *They were above submitting to consultations with dentists.* Their patients, who wanted advice for relative complaints of the teeth, sent for or went to them, and from them took the instructions which *the dentists were to obey.* Hunter laudably condescended to accommodate himself to the necessity of the case, and to fill up this chasm in practice

he placidly attended on fixed days and hours at the house of a dentist, to aid him by consultation for the benefit of his patients."

In Chapter IX, which treats "Of drawing the teeth," Hunter has, to his caution against rapid extraction of the teeth, appended the following note:—"I must do Mr. Spence the justice to say that this method appears to be peculiar to him, and that he is the only operator I ever knew who would submit to be instructed, or even allow an equal in knowledge; and I must do the same justice to both his sons." Foot thereupon says, "John Hunter was not found to bestow his smiles upon every dentist; his sincerity in friendship confined him alone to the family of the Spences;" and then proceeds to give a personal recollection of the elder Spence, dating from 1762, when he kindly extracted without fee a tooth from Foot, who was then an apprentice.

No doubt, as Bell has pointed out, Hunter made mistakes in his work on the teeth, particularly as regards the development of the second set, and their relation to the temporary teeth. But the sections on gumboils, on excrescences from the gum, on deeply seated abscesses in the jaws, and on abscess of the antrum maxillare show that he had considerable experience in the ailments connected with the teeth and their surgical treatment. His chapter on "Transplanting teeth" shows how careful he was in dealing with all the details of such a delicate operation, which we know to have been highly successful in his hands, although eventually abandoned on account of the fear of transmitting syphilis.

In 1786 John Hunter published 'A Treatise on the Venereal Disease,' which excited a good deal of controversy at the time, and has been freely criticised during the last fifty years. Hunter had no doubt seen a great deal of venereal disease whilst serving with the army both at home and abroad, though he seems to have ignored to a very great extent the labours of others in the same field of inquiry. His reputation as an anatomist and surgeon

was so great that the work was received both at home and abroad with acclamation. In 1787, the year after publication, French and German translations appeared. In 1788 there was a second English edition, and in 1791 the first American edition was published. There were not wanting, however, contemporary critics, and foremost among them must be mentioned Benjamin Bell of Edinburgh, and Mr. Jesse Foot, surgeon, to whom I have already referred. This last gentleman brought out a volume of 450 pages, in which he goes *seriatim* through Hunter's work, criticising as far as possible all his statements, and speaking of him invariably as the "Professor," which he seems to regard as a term of reproach.

Unfortunately Hunter started with the idea that the poisons of gonorrhœa and syphilis were identical, and so early as 1767 made experimental inoculations upon himself with gonorrhœal matter, as he believed, but which no doubt was mixed with the discharge from a chancre within the urethra. A chancre and secondary symptoms resulted, for which mercury was taken, and in his own words "the time the experiments took up from the first insertion to the complete cure was about three years." After such a personal experience it is not surprising to find Hunter laying down explicitly, "The experiment proves that matter from a gonorrhœa will produce chancres." His critic, Foot, takes the same view, and says sarcastically, "I shall be glad to be informed by the Professor who ever doubted but that it [the poison] was the same!" It is the more curious that such an acute observer as Hunter should have fallen into such an error, for we find him laying down that "till about 1753 it was generally supposed that the matter from the urethra in gonorrhœa arose from an ulcer or ulcers in that passage, but from observation it was then proved that this was not the case." He proceeds also to show, by the examination of the bodies of criminals known to be the subjects of gonorrhœa at the time of execution, that the prevailing

belief in the existence of warts or growths in the urethra in all cases of gonorrhœa was incorrect.

Hunter seems to have had undoubting faith in the contradictory statements of his patients, and particularly of his female patients, the subjects of gonorrhœa. It is difficult otherwise to understand the conclusions he comes to, for they often appear to be entirely opposed to modern experience. His views also on swelled testicle do not commend themselves to the modern surgeon, for he held that the inflammation was due to "sympathy," and that the testicle "is never affected with the venereal disease, local or constitutional." However much in the present day we may disagree with Hunter in recommending a mercurial course for the treatment of gonorrhœa, we must allow that he thoroughly appreciated the various affections of the urinary organs which commonly result from and follow that disorder. Still more valuable are the chapters on "Supposed consequences of gonorrhœa," disorders which have proved a happy hunting-ground for the quack for many generations. Hunter's description "of the discharge of the natural mucus of the glands of the urethra" is brief but forcible :—"The small glands of the urethra and Cowper's glands secrete a slimy mucus similar to the white of an egg, not coagulated. This seldom appears externally or flows from the urethra but during the indulgence of lascivious thoughts, and is seldom or never attended to except by those who are either under apprehensions of a gonorrhœa coming on, or imagine the last infection is not gone off entirely, and are therefore kept in constant terror by this natural discharge."

He then passes on to speak of "the discharge of the secretions of the prostate gland and vesiculæ seminales," and expresses a strong opinion, in which modern physiologists agree, that the vesiculæ are not seminal receptacles. "It is a discharge of mucus," he says, "by the urethra which generally comes away with the last drops of urine, especially if the bladder is irritable, and still more at the time of being at stool, particularly if the

patient be costive, for under such circumstances the straining or action of the muscles of these parts is more violent. It has generally been supposed that this discharge is semen, and the disease is called a seminal weakness ; but it appears from many experiments and observations that the discharge is undoubtedly not semen."

So highly do I appreciate John Hunter's good commonsense teaching on this important subject, that I have for many years kept this page in his works doubled down in order that I may read out an authoritative statement to those miserable persons who consult the surgeon from time to time for so-called "spermatorrhœa"—a word which one could wish eliminated from our language.

It is remarkable that the term "Hunterian chancre" should have been the universally accepted description of the primary syphilitic sore, for Hunter himself says: "Venereal ulcers have one character, which, however, is not entirely peculiar to them, for many sores that have no disposition to heal (which is the case with a chancre) have so far the same character. A chancre has commonly a *thickened base;* and although in some the common inflammation spreads much further, yet the specific is confined to this base." But what is most remarkable is that Hunter denied the existence of chancres on the mucous membrane of the vagina or cervix uteri, and *a fortiori* did not recognise such unusual occurrences as chancre of the lip, &c. Although the anatomy and pathology of the lymphatic system, including glandular enlargements, had made great progress during the previous century, yet the primary indolent bubo was not recognised as typical of syphilitic infection. Thus we find Hunter describing all kinds of buboes as occurring during the primary stage of syphilis, and even advocating the mercurial treatment of suppurating chancres and inflamed buboes.

From what has been already said it cannot surprise us to find Hunter's views of the *lues venerea* or constitutional syphilis little in accordance with the opinions of the present day. It will be sufficient to quote the following

as regards the transmission of syphilis from parent to child. "It is supposed," says Hunter, "that a fœtus in the womb of a pocky mother may be infected by her. *This I doubt very much.* However one can conceive the bare possibility of a child being affected in the womb of a pocky mother,—not indeed from the disease of the mother, but from a part of the same matter which contaminated the mother!" Again, he says, "It has been supposed that such a contaminated child could contaminate the breasts of a clean woman by sucking her;" and yet a little later on he describes vividly enough the infection of a nurse by a syphilitic child!

Yet with all these mistakes, which it has taken nearly a century to correct, we owe John Hunter a great debt of gratitude for his unfailing faith in mercury as the specific remedy for syphilis. So long as varieties of venereal sores were undistinguished, mercury was, of course, often given unnecessarily and with disastrous effects; but if it had not been for Hunter it seems likely that the heresy which the Bells and other Scotch surgeons promulgated, that syphilis did not require mercury for its cure, would have made much greater way than it did. Thanks to the labours of Ricord, Hutchinson, and Hill, the diagnosis and treatment of syphilis are now placed on a firm basis; and if it had not been for the "shrieking sisterhood," and the action of a few effeminate members of Parliament, we might now be rejoicing in the reduction of venereal disease in our army and navy by those most beneficent laws known as the "Contagious Diseases Acts," which were unhappily wiped out by a weak-kneed Government just when they were conferring the greatest benefit upon suffering humanity.

The papers which John Hunter himself contributed to the 'Transactions' of a Society for the Improvement of Medical and Chirurgical Knowledge were only two in number. The first was read on February 6th, 1784, and was "On the Inflammation of Internal Coats of Veins." The frequency of phlebotomy gave rise, as he says, to

a very frequent complaint, that is an inflamed arm after bleeding ;" and he proceeds to show that this arose from the wound not healing by first intention. Numerous post-mortem examinations enabled him to state correctly enough that, as the result of inflammation of the lining membrane of the vein, in some cases adhesion of the coats and obliteration of the canal took place ; whilst in others suppuration ensued and abscesses had to be opened, or led to the death of the patient by what we now term pyæmia. It is remarkable that Hunter does not mention thrombosis, and does not appear to have recognised the formation of clot in the vein as an early stage of phlebitis.

In the treatment of phlebitis Hunter urges the application of a compress to produce adhesion of the surfaces of the vein ; and though this can be but of little service, it is noteworthy that he should have anticipated the proposal of Mr. Henry Lee to pass a pin beneath the vein so as to prevent pus getting into the circulation, by upwards of seventy years. Nothing is more remarkable in the present day than the almost absolute safety which attends the removal of portions of varicose veins, as recommended by the late John Marshall, provided strict attention be paid to asepsis.

Hunter's second paper was read on August 18th, 1789, and was " On Introsusception "—as it was spelt in those days. He says, " When the introsusception is downwards it may be called progressive, and when it happens upwards, retrograde ;" and attributes the slipping of one piece of intestine within another solely to some additional weight in the gut above. Again, Hunter says, " The outer fold is the only one which is active, the inverted portion being perfectly passive and squeezed down by the outer, which inverts more of itself."

Although these views are not received in the present day, the figures of two cases of intussusception, which Hunter gives, most accurately represent the disorder, and could not be improved upon. His treatment is curiously dominated by his views as to the action of the outer fold of the intus-

susception, for he says, "medicine can never come in contact with the outer fold," and he advises, therefore, giving vomits, "with a view to invert the peristaltic motion of the containing gut, which will have a tendency to bring the intestines into their natural situation." It is remarkable that neither inflation of the bowel from below, which dates from Hippocrates, nor the proposal of Praxagoras to open the abdomen and thus reach the seat of trouble, which in modern times has proved so successful, receives any mention in this essay.

John Hunter seems to have been the originator of the practice of feeding artificially through a stomach tube. He read before the Society for the Improvement of Medical and Chirurgical Knowledge on September 21st, 1790, "A case of Paralysis of the Muscles of Deglutition, cured by an artificial mode of conveying food and medicines into the stomach." The patient was a man of fifty, a hypochondriac who lost the power of swallowing, and was brought to Hunter for relief. Hunter proposed that a hollow flexible tube should be passed down into the stomach, and mentioned his having an instrument of the kind made of spiral wire covered with gut, for the purpose of injecting liquids into the stomachs of animals. The plan was adopted and the patient recovered. The instrument used was a fresh eel skin of rather small size, drawn over a probang, and at the end of the paper it is observed :—"An eel skin seems very well adapted for this purpose, being smooth, pliable, and readily passed into the stomach ; but as cases of this kind may occur when eels cannot be procured, a portion of the gut of any small animal, as a cat or lamb, will make a good substitute."

This same volume of the Society's 'Transactions' contains a paper by Sir Everard Home "from materials furnished by Mr. Hunter." It is entitled, "Some Observations on the Loose Cartilages found in Joints," in which the view is maintained that the cartilages originate in blood-clots rather than in the loose fringes of the joint.

Hunter advises the removal of such bodies by an incision above and to the inner side of the patella, and describes graphically the extreme difficulty of the proceeding, owing to the tendency of the cartilages to escape into the cavity of the joint.

I have thus endeavoured to show by his own writings that John Hunter was an able and experienced surgeon as well as an unrivalled anatomist. That he had been for some years before his death the leading surgeon in London cannot be doubted, for even Jesse Foot allows this. He says, "I think I may affirm that his consultations were more in fashion than any other surgeon's, and that his range of practice was more extensive—that we heard more of the name of John Hunter than of any other surgeon."

Evidence of this kind is better than that which nowadays is too often looked upon as the test of professional success—the amount of legacy duty. Hunter died a poor man, not because he did not make a large professional income, but because he spent all he made upon his museum. When he died in 1793 we find his influential friends exerting themselves to procure a grant for his widow from the government of the day; and eventually in 1799 Parliament voted £15,000 for Hunter's Museum, and placed it under the care of the Corporation of Surgeons. The Royal College of Surgeons of England, the successor of that corporation, cannot be said to have failed in its duty towards Hunter's collection, and the splendid series of museums which the College has erected during the present century, show the interest taken by the Council of this College in the promotion and advancement of the art and science of surgery.

It is now my duty, in compliance with the wishes of the founders of this Oration, to refer to those eminent Fellows of this College who have passed away since the last Oration. And first let me remind you of the tragical circumstances under which the Hunterian Oration of 1895 was delivered, the orator, Mr. Hulke, being then on his death-bed, and the oration being read to us by Mr.

Bryant. The death of a President in office has fortunately been almost unknown—the only other example having been in 1831, when Mr. Headington died and was succeeded by Mr. Robert Keate.

John Whitaker Hulke was a schoolfellow of my own for a time, and when I passed on from the school into the Medical Department of King's College, I found him a third year's man and an out-patient dresser under Bowman. He became a Member of this College in 1852, a Fellow in 1857, and in 1859 gained the Jacksonian Prize, the subject being "The Morbid Changes in the Retina, with special reference to their recognition by the Ophthalmoscope"—an instrument with which Hulke had early acquired great facility. He took office at the Moorfields Ophthalmic Hospital, and was for a time Assistant Surgeon to King's College Hospital; but when the Council of that institution developed their suicidal policy of restricted tenure of office, Hulke migrated to the Middlesex Hospital, of which he died the Senior Surgeon. Hulke was elected a Member of the Examining Board in Anatomy and Physiology in 1876, and of the Court of Examiners in 1880. In 1881 he became a Member of the Council, and in 1893 President, being re-elected to that office in 1894. He held the Arris and Gale Lectureship in this College from 1868 to 1871, and delivered the Bradshaw Lecture in 1891. Mention must also be made of the Bowman Lecture which Hulke delivered before the Ophthalmological Society, and in which he paid an eloquent tribute to the scientific attainments of his old master Sir William Bowman. Although so eminent as an ophthalmologist, Hulke steadfastly declined to be considered an oculist, and thus probably damaged his success as a practitioner, though his opinion on obscure eye-diseases was sought and appreciated by his professional brethren. He devoted much of his leisure time to the study of palæontology and geology, and was President of the Geological Society in 1883. A pathologist of the highest standing, he became President of the Pathological

Society of London in 1883, and of the Clinical Society in 1893, and had not completed his term of office. Hulke was not a prolific writer, but contributed several valuable surgical papers to the 'Medico-Chirurgical Transactions;' in conjunction with Mr. Holmes he edited the third edition of 'A System of Surgery.' A learned, highly accomplished gentleman, Hulke was deeply regretted by those who had the pleasure of his friendship.

Foremost among these was *Sir William Savory*, upon whom Hulke's unexpected death had a most serious effect, and doubtless a direct influence in leading to his decease on March 4th, 1895. A distinguished student of St. Bartholomew's Hospital, he early became a member of its teaching staff, and in due course held the offices of Assistant Surgeon and Surgeon, retiring as Senior Surgeon in 1891. He became a Member of this College in 1847, and a Fellow in 1852. In 1870 Savory, though not in the Council, was elected into the Court of Examiners, this being the first occasion on which the old routine was broken through.

As an examiner he did much to raise the standard, which had become very low in the hands of the ancients who had attained office by seniority; and though not a popular examiner he was known to be fair and without crotchets. In 1877 Savory was elected into the Council, and held office until 1893, having filled the office of President for four consecutive years—an unprecedented occurrence. It fell to his lot while President to receive the Queen when she was pleased to lay the first stone of the Examination Hall of the United Colleges in 1886; and also H.R.H. the Prince of Wales, when he unveiled the statue of Her Majesty in the same building. At both ceremonies Savory well maintained the dignity of his office, and his speech on the latter occasion lost nothing by following the eloquent periods of Sir Andrew Clark. In 1890 he was created a baronet.

Sir William Savory's position at this College was unique, since he alone held the office of President for four years.

The period was a stormy one, for the Fellows and Members forming the Corporation then began to assert what they believed to be their rights to a share in the government of the College. It required a strong President to maintain order in the somewhat excited meetings which were assembled at the College; and when certain persons ventured to call a meeting unauthorised by the Council, Savory took measures to frustrate the effort. His name came prominently before the public as the defendant in an action brought against the President and Council by certain Members of the College, who eventually were proved in the wrong, and were mulcted in the costs of their proceedings.

As a surgeon Savory was intensely conservative, and was inclined to regard the practice of St. Bartholomew's as the *ultima Thule* of scientific surgery. His address before the British Medical Association at Cork illustrated this, and his surgical lectures, though eloquent, were decidedly antiquated. He published little beyond a few cases in the 'Medico-Chirurgical Transactions,' and the Hunterian Oration which he delivered in 1887. None who were present on that occasion will fail to recall the delivery from memory of that eloquent address.

Arthur Durham died on May 7th, 1895, after a short illness, aged sixty-one, thereby causing a vacancy in the Council of this College, to which he was elected in 1884. A distinguished student of Guy's Hospital, he lived to be its Senior Surgeon, from which post he retired a year before his death, to become one of the Consulting Staff. An excellent anatomist, he made many of the dissections used by Mr. John Hilton to illustrate his lectures on "Rest and Pain" delivered in this theatre in 1860–1. He became a Fellow of this College in 1860, being next in seniority to myself, and the friendship begun during that examination continued, I am happy to say, to the end, when as President of the College I attended his funeral service. Energetic to a degree, Durham worked hard at his profession, and taught anatomy for many years

most successfully. In 1876 he was appointed a Member of the Board of Examiners in Anatomy and Physiology of this College, and but for his unfortunate deafness he would doubtless have joined the Court of Examiners. As a surgeon he was careful, and yet enterprising. He early took up the study of the laryngoscope, and in 1870 contributed a very able article to Holmes's 'System of Surgery,' on the diseases of the larynx. His studies and practice in this department led him to invent a modified tracheotomy tube, and "Durham's tube" has been a well-known aid to surgery for many years. But Durham was a good all-round surgeon, and both in lithotomy and colotomy displayed a dexterity which was remarkable, and he was the first to perform nephrectomy at Guy's Hospital.

Personally he was popular with his patients and his colleagues. At Guy's Hospital he was beloved by the students, in whose welfare he took a warm interest, and being a wealthy man he was able to aid them in various directions. A member of the Garrick Club, he was intimate with many members of the dramatic and musical professions, to whom he most liberally gave professional assistance when required.

In *Sir John Erichsen*, who died in September last at the ripe age of seventy-eight, English surgery lost a representative man. Throughout the civilised world, and especially in the United States of America, 'Erichsen's Surgery' has been for the last forty years the great text-book for the student and practitioner, and thanks to the labours of successive editors, it has fully maintained its position in the van of surgical progress. Erichsen though of Danish family was entirely educated in England, and was an Englishman in thought and feeling. A student of University College, London, in its early years, he was present at the opening of the hospital in 1834, when Liston and Samuel Cooper were the surgeons, and Richard Quain assistant surgeon. Here he filled the office of house surgeon under Cooper, and subsequently studied in

Paris, where he witnessed Amussat's first colotomy in 1839. He became a Member of this College in 1839, and a Fellow by examination in 1845.

As a young man Erichsen worked at physiological subjects, and for a short time taught physiology at the Westminster Hospital. In 1845 he gained the Fothergillian gold medal of the Royal Humane Society for "an experimental inquiry into the nature and treatment of asphyxia," which enabled him to speak with some authority when he became a member of the Royal Commission on vivisection in 1875.

At University College Hospital there was no opening for Erichsen until after the sudden death of Liston in 1847. In 1848 he and John Marshall were appointed assistant surgeons, and in 1850, after Syme had indignantly returned to Edinburgh and Arnott had resigned office, the council was glad to fall back upon Erichsen as an eminently safe man, and he was made professor of surgery and surgeon to the hospital in 1850. He proved to be an eloquent lecturer and a capable, painstaking surgeon, who though only thirty-two was able to hold his own with a turbulent class and an envious colleague. In 1853 was published the 'Science and Art of Surgery,' containing the substance of the lectures on surgery delivered by Erichsen in the three previous years, and admirably illustrated with woodcuts. This became rapidly the standard work on surgery both in Great Britain and America, and has been translated into most of the European languages. A somewhat left-handed compliment was paid to its author by the American Government, which, during the war of secession, printed a special edition and presented each of its army surgeons with a copy, but altogether declined to make any compensation to the author.

Erichsen held the chair of surgery in University College for fifteen years, and was in 1866 succeeded by the late John Marshall, himself succeeding Mr. Quain as Holme Professor of Clinical Surgery. This post he held

for ten years, resigning his charge of the wards in 1875, after having held them for exactly a quarter of a century. During that time fifty young men, beginning with Sir Henry Thompson, Sir Watkin Williams, one of Her Majesty's judges, and Sir Joseph Lister, whom we are all glad to salute as a medical peer, served under him as house-surgeons, many of whom have attained eminence and have held office in various hospitals. A marble bust presented by his old pupils and friends adorns the museum of University College alongside those of Liston and Quain ; and a *replica,* which many will remember in the dining-room of his house, has by Sir John's will become the property of this College.

In this College Sir John Erichsen attained the office of President in 1880, and presided at the Hunterian Festival of 1881 with dignity and success. Elected into the Council in 1869, he was foremost in proposing those meetings of the corporation which have proved not unmixed benefits, and the first of which took place in 1870. After some years' experience of these meetings and their methods, Erichsen came down to one of them, and made a strong protest against the claims put forward on behalf of the Members of the College. This he subsequently expanded into a pamphlet entitled 'The Member, the Fellow, and the Franchise' (Lewis, 1886), which I commend to those who wish to read the case, stated temperately and clearly by one who thoroughly understood the subject.

Erichsen was the recipient of numerous honours both at home and abroad. He was made a Fellow of the Royal Society somewhat late in life, was Surgeon Extraordinary to the Queen, and had been President of University College, London, since 1885. In 1895 he received a baronetcy, but as his wife, to whom he was devoted, had died previously, and he had no family, this was somewhat of a barren honour. Those who had the pleasure of Sir John Erichsen's acquaintance will agree with me in regarding him not merely as a leading

surgeon of the nineteenth century, but also as an amiable, courteous gentleman, whom to know was to love.

Sir George Murray Humphry, who died the day after Sir John Erichsen, had for many years occupied the unique position of representing an ancient University *rebus in medicis.* Humphry and Cambridge were so closely bound together for over half a century, that it was impossible to differentiate them, and one can hardly contemplate Addenbrooke's Hospital or the Anatomical Museum without the presence of that tall, thin body which contained a master mind. Born in 1820, Humphry became a pupil of the great Crosse of Norwich, and there learned lessons which served a lifetime. A student of St. Bartholomew's, he imbibed the traditions of that great hospital, and yet even in pupilage he was open to new ideas, for he told me once how astonished and delighted he had been at witnessing some operations by Fergusson, who had then recently come to London. He became a member of this College in 1841, and in the following year was appointed Surgeon to Addenbrooke's Hospital, and began his life's work at Cambridge. In 1844 Humphry was one of the second batch of Fellows of this College elected under the charter of 1843, being the youngest Fellow ever elected.

At Cambridge he worked and taught in the hospital, and soon gained considerable practice of all descriptions, for Humphry took all that came to him, and was ready to apply midwifery-forceps or treat pneumonia, as well as do more strictly surgical work. With a view to holding University office he became in 1847 a Fellow-Commoner of Downing, and graduated M.B. in 1852. In 1858 Humphry published his 'Treatise on the Human Skeleton,' which treated the subject philosophically, and was illustrated by the drawings of his wife. In 1866 he became Professor of Human Anatomy, and filled this chair with the greatest success until 1883, when he became Professor of Surgery without a salary. He had succeeded in practically rebuilding Addenbrooke's Hospital

and in rehabilitating the Museum of Anatomy and Pathology, and thus was able to instruct the large classes of medical students which began to flock to Cambridge, if not for the whole of their medical education, at least for a great part of it. In 1869 Humphry was elected to represent his University in the General Medical Council, and he held the office for twenty years. In this College he became a member of Council in 1868, a member of the Court of Examiners from 1877 to 1888, and delivered the Hunterian Oration in 1879. As a councillor and examiner he was most punctual in his attendance and careful in the discharge of his duties; and one could not but admire the pluck and determination which brought him up from Cambridge on five afternoons a week, for perhaps three weeks together, to return by a train which got him home about 1 a.m. with a morning lecture to be faced at nine.

Besides the offices which he filled in his own university, Humphry found time to be the first President of the Anatomical Society, in the work of which he took great interest, and to fill the chair for two years at the Pathological Society of London. He there presided at a memorable discussion on Phagocytosis and Immunity, which occupied three evenings in the spring of 1892, and his concluding remarks showed how thoroughly he had grasped a difficult subject, which he felt still required further elucidation. In January, 1891, Humphry received the honour of knighthood, and in 1892, on the death of Sir George Paget, became the President of the Cambridge Graduates Club, and did much to forward its interests.

Of late years he had devoted much time and attention to the investigation of the changes in the skeleton due to old age, and these researches he embodied in a small volume on 'Old Age' published in 1889. Although latterly in failing health he still took a lively interest in all professional matters, and was able to contribute an article on "Tetanus" to Professor Clifford Allbutt's 'System of Medicine' published in 1896.

On the last day of January, *Sir Spencer Wells* died at Antibes in his seventy-ninth year. So lately as last October, Sir Spencer Wells attended the Council dinner, but it was felt then by his friends that his health was seriously shaken, and that neither his bodily nor mental powers were in their full vigour. Thomas Spencer Wells became a member of this College in 1841, and began his professional career in the Royal Navy. He was made a Fellow in 1844, became a member of Council in 1871, and President in 1882, when he was also Hunterian Orator.

The name of Spencer Wells must be inseparably connected with the operation of ovariotomy, for though the United States can claim the original ovariotomist in Ephraim McDowell so early as 1809, it is not too much to say that the operation, by which the lives of thousands of women have been prolonged in comfort, was not fully established as a surgical procedure until after 1858, when Wells took it up. Let us give Lizars, Hawkins, Bird, and Baker Brown all the credit they deserve as pioneers in a difficult and even dangerous career, and the fact still remains that the work done by Wells at the Samaritan Hospital placed the operation of ovariotomy on a firm basis. He began from the first to publish the details of each case with the result, whatever it might happen to be, and from his position as editor of the 'Medical Times and Gazette' he was able to secure a publicity for his records which soon attracted the attention of the profession both in this country and abroad. It would be futile now to discuss the details of these early operations, for Wells would have been the first to allow that he learnt by experience. Whether he was right in adopting Hutchinson's suggestion of clamping the pedicle outside the abdominal wall is now a matter of small moment, though at the time the practice appeared to have a marked effect in lowering the rate of mortality. Adopting, in later years, the details of Lister's antiseptic treatment, Wells abandoned the clamp in favour of the

ligature, thereby conforming to the practice of most of the ovariotomists who have succeeded him.

Probably the part of the operation in which Spencer Wells made the most important innovation, and in which he took a natural pride, was the bringing together of the two peritoneal edges of the wound. In his lectures, delivered in this theatre in 1878, he pointed out how, by the sacrifice of a few rabbits, he had been able to prove that immediate union of the divided serous membrane followed upon the proper application of sutures, with a marked improvement in his results when the practice was adopted upon patients. These few and necessary experiments caused him to be abused by that small body of selfish enthusiasts who ignorantly strive to withstand the progress of scientific knowledge, much as Mrs. Partington resisted the waves of the Atlantic.

Spencer Wells did not, however, confine his attention to diseases of the ovaries and their treatment, but took an active part in that advance in abdominal surgery which has been such a remarkable feature of the last twenty years. The removal of uterine tumours, and then of the uterus itself, early engaged his attention, and in a work published in 1885 he gave his experience in this then novel department of surgery. He was the first British surgeon to remove an enlarged spleen, in 1865, and though all his three cases unfortunately were fatal, the operation proved successful in the hands of Péan two years later, and from his case we may date the introduction of splenectomy into modern surgery.

Sir Spencer Wells for many years filled the honorable post of Surgeon to the Queen's Household, resigning only last year on account of advancing age. In 1883 he received the honour of a baronetcy, which his position for years as one of the leading surgeons of the day fully justified.

Sir Spencer Wells was a highly cultivated gentleman, who spoke several foreign languages and had been able to indulge his predilection for foreign travel, so that he

was well known on the Continent, in America, and even in India. His hospitality at his beautiful home at Hampstead was well known, and on occasions such as the International Congress in 1881 he was surrounded by admirers from all parts of the globe. Certainly in the latter half of the nineteenth century Spencer Wells did much to support the credit of British surgery.

And now, sir, having completed the roll of the illustrious departed, let me conclude by saying a few words on my own behalf. In July my period of office as a Councillor of this College expires, and this is therefore the last occasion on which I shall have the right to address my colleagues and the College at large from this place. Gentlemen, I cannot but view the future of this College with some anxiety. This great corporation is, I fear, on the high road to become something very unlike the Royal College of Surgeons of England which has existed now for nearly a hundred years. Hitherto it has been regarded as the home of surgical science, and its funds have been devoted to the advance of the art of surgery by providing unrivalled opportunities for study in its museum and library. This College will, in my opinion, lose professional prestige and fall in public estimation, if its funds should ever be diverted from these legitimate purposes in order to support the interests of individual members of the profession, however worthy in themselves. It will be a melancholy day for British Surgery if ever this Royal College should become a gigantic Protection Society, to fight the puny battles of its members who may happen to come into collision with each other or with the public. It is to the Council, and to the Fellows who elect the Council, that we must look for the maintenance of that high professional position which this College has hitherto occupied, and for the furtherance of the art and science of Surgery,—*quæ prosunt omnibus artes.*